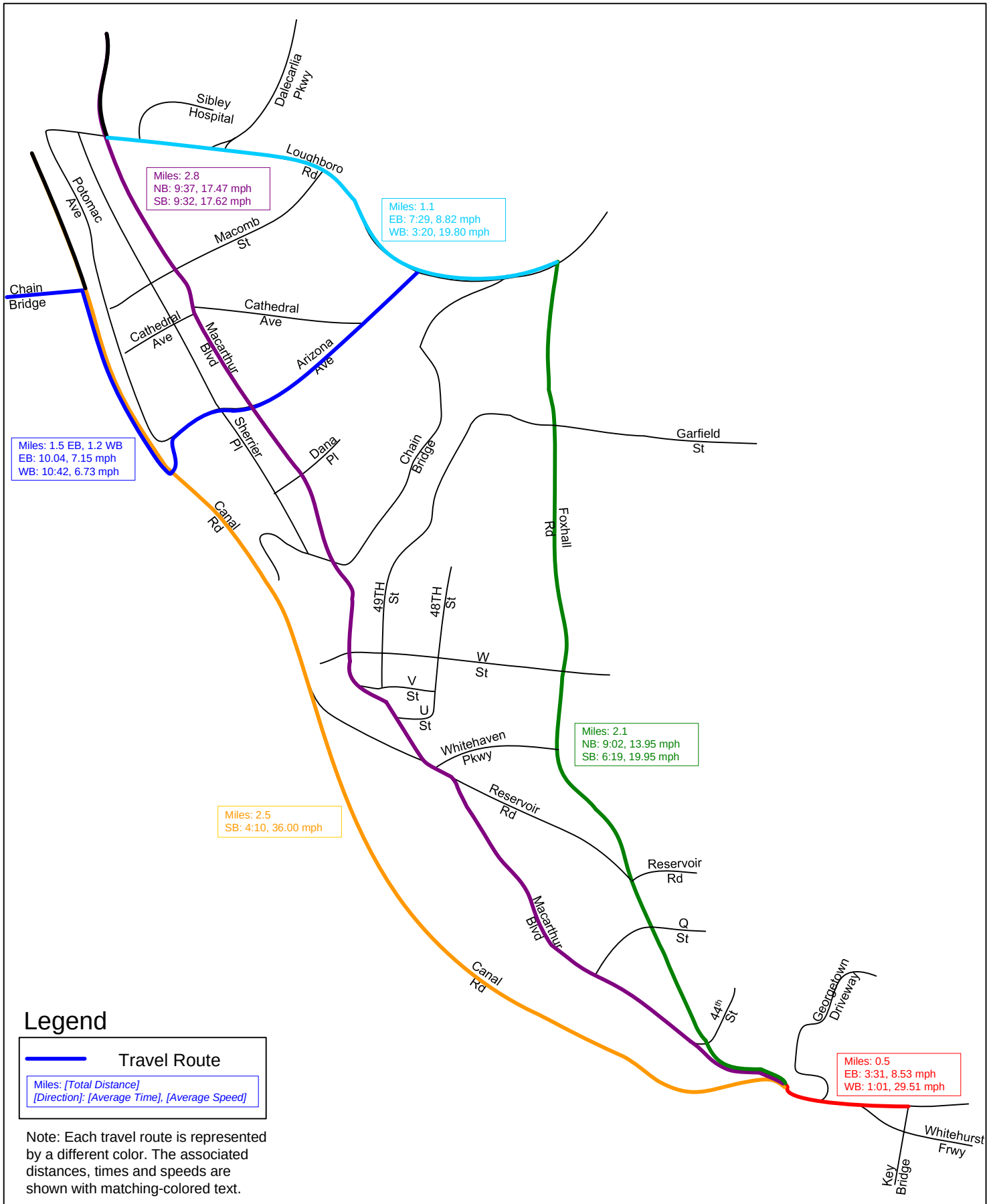
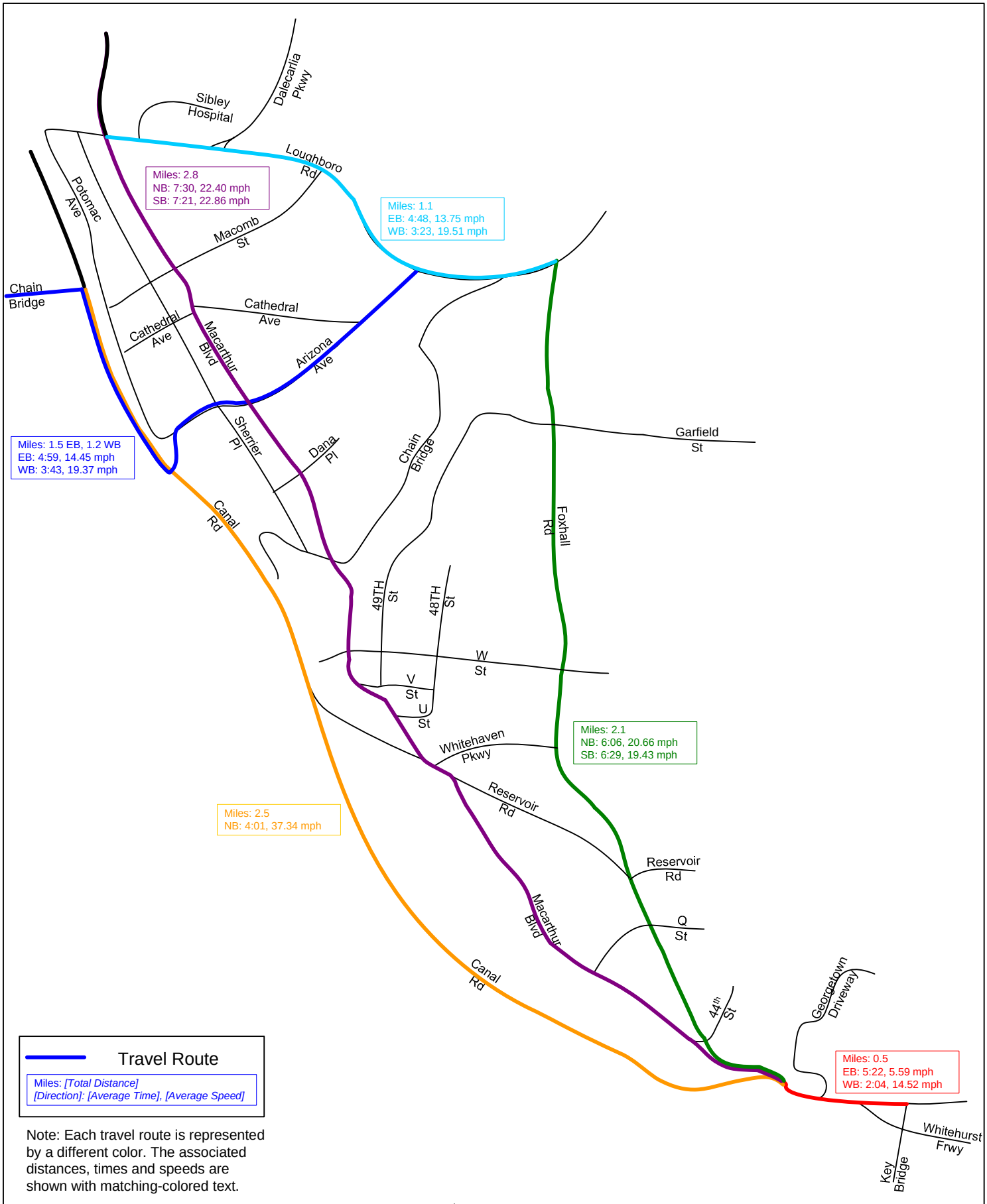


Not to Scale		Palisades Traffic Impact Study	Speed and Travel Times During The AM Peak Period	FIGURE 9
August, 2002	N			



Note: Each travel route is represented by a different color. The associated distances, times and speeds are shown with matching-colored text.

Not to Scale August, 2002	N	**Palisades Traffic Impact Study**	**Speed and Travel Times During The PM Peak Period**	**FIGURE 10**

ORIGIN-DESTINATION PATTERNS IN THE STUDY AREA

In order to gain an understanding of existing traffic patterns in the study area, the Study Team conducted a comprehensive assessment of origins and destinations for vehicles entering and exiting the study area during the AM and PM peak period. The origin-destination survey helped identify the travel patterns of all vehicles entering the study area during the peak hours.

Data Collection for Origin-Destination Survey

The data collection effort for the origin-destination survey encompassed the following tasks:

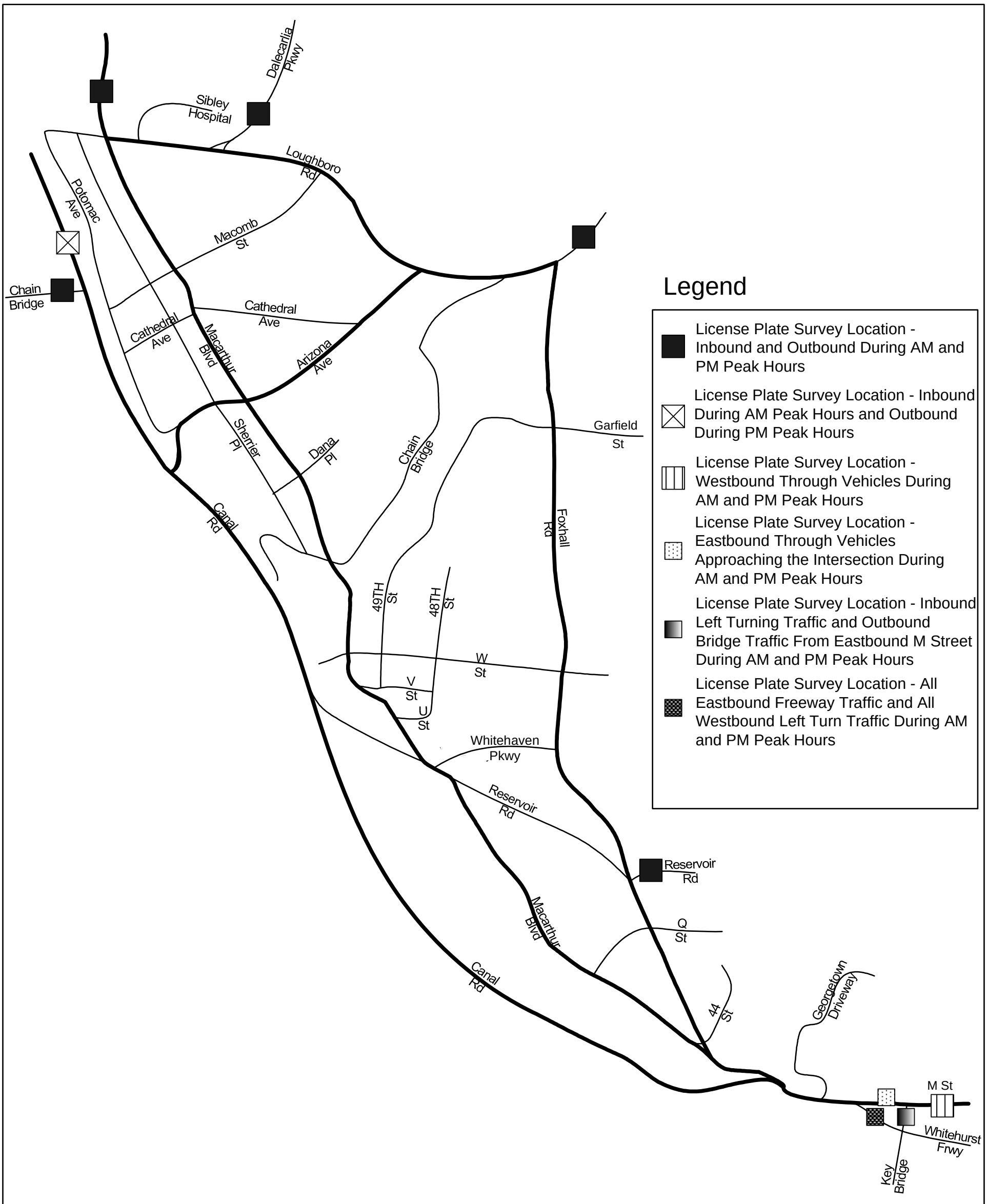
1. Recording of license plates at all major entry and exit points of vehicles entering and exiting the study area: survey personnel (surveyors) recorded license plate data, state and number, onto tape recorders at the locations shown in Figure 11 on December 18, 2001.
2. Recording of missed vehicles: if a surveyor could not get the license plate of a vehicle, he/she was instructed to note the vehicle as a "missed" to have control totals that could be used for the expansion of the survey data.
3. Transcription of license plate records: surveyors entered the state and license plate data for each location onto a computerized database.

Data Processing for Origin-Destination Survey

Study Team staff used the license plate database to match entering and exiting vehicles. The Study Team made the following assumptions in the database matching process:

1. Unmatched exiting vehicles with D.C. license plates were assumed to originate their trips in the study area.
2. Unmatched entering vehicles were assumed to terminate their trips in the study area.
3. 15 percent of the unmatched volumes at the entry and exit points were assumed to have entered or exited the study area via streets where license plate data was not collected.
4. The missed vehicles have the same travel patterns as the vehicles for which origin origin-destination matches were found.

In the first step of the license plate matching process, the Study Team developed a "raw" origin-destination trip matrix excluding unmatched vehicles and missed vehicles. In the second step, the Study Team used the assumptions listed above to determine a "total" origin-destination trip matrix for all vehicles entering and exiting the study area.



Not to Scale	N	**Palisades Traffic Impact Study**	**License Plate Survey Locations for Origin-Destination Study**	**FIGURE 11**
August, 2002				

Trip Matrices and Findings of Origin-Destination Surveys

Tables 2 and 3 present the results of the vehicle matching for the study area during the AM peak period (7:00 AM – 9:00 AM). The matrix of origins and destinations shown in Table 2 includes the adjustments to account for unmatched and missed vehicles[1]. The main findings of the origin-destination survey results for the AM peak period are:

- Approximately 12 percent of the vehicles entering the study area are destined to locations within the study area.
- Approximately 10 percent of the vehicles exiting the study area originate their trips within the study area.
- The most used entry roadways during the AM peak period are the Clara Barton Parkway and the Chain Bridge.
- The most used exit roadway is the Whitehurst Freeway.
- The percentage of internally generated trips at the exit points ranges from seven to 18 percent for the various exit roadways.
- The most used route to traverse the study area is used by vehicles entering on Clara Barton Parkway and exiting via the Whitehurst Freeway.
- Roads in the study area are being used for commute trips from Virginia origins to Virginia destinations. For example, 12 percent of the vehicles traveling to Virginia via the Key Bridge enter the study area via the Chain Bridge.
- Approximately one-half of the vehicles exiting via Nebraska Avenue originate their trip at the Southern end of the study area, the Key Bridge and Whitehurst Freeway.
- Over 40 percent of the vehicles destined to the study area enter through the intersection of Chain Bridge and Clara Barton Parkway.
- As shown in Figure 12, at all the study area exit roadways there were more Virginia or Maryland license plates than license plates from the District of Columbia.
- Virginia and Maryland are also the most prevalent license plates for all study area entry roadways, with the exception of Reservoir Road and Nebraska Avenue. At these two entry points, there were more District of Columbia license plates than from any other jurisdiction.

Tables 4 and 5 present the results of the vehicle matching for the study area during the PM peak period (4:00 PM – 6:00 PM). The matrix of origins and destinations shown in Table 4 includes the adjustments to account for unmatched and missed vehicles[1]. The main findings of the origin-destination survey results for the PM peak period are:

- Approximately three percent of the vehicles entering the study area during the PM peak period are destined to locations within the study area.
- Approximately nine percent of the vehicles exiting the study area during the PM peak period originate their trips within the study area.

[1] The unadjusted "raw" origin-destination matrices are included in Appendix D.

Table 2

Origin-Destination Trips During the AM Peak Hours (7:00 AM - 9:00 AM)

		DESTINATIONS									
	LOCATION	M Street Eastbound	Key Bridge Outbound	Whitehurst Freeway Eastbound	Reservoir Rd Eastbound	Nebraska Av Eastbound	Dalecarlia Pkwy Northbound	MacArthur Blvd Northbound	Northbound Clara Barton Pkwy	Chain Bridge Outbound	Internals
ORIGINS	M Street Westbound at Key Bridge	**0**	4	34	8	22	6	17	0	17	19
	Key Bridge Inbound Left Turns	57	**0**	145	23	640	95	109	0	46	121
	Westbound Whitehurst Freeway	103	135	**0**	80	517	167	157	0	123	199
	Westbound Reservoir Road	8	15	48	**0**	40	28	43	0	47	13
	Westbound Nebraska Avenue	28	78	262	37	**0**	77	134	0	274	243
	Southbound Dalecarlia Pkwy	38	54	364	54	99	**0**	119	0	180	132
	Southbound MacArthur Blvd	67	64	454	108	107	68	**0**	0	84	209
	Southbound Clara Barton Pkwy	168	199	1511	172	239	146	164	**0**	190	198
	Inbound Chain Bridge	163	91	409	157	551	269	198	0	**0**	487
	Internals	72	137	335	73	169	168	109	0	185	**N/A**

Note: 1. The Volumes shown on the table are for a two hour period.
2. The trips shown on this table include adjustments to the raw matching data to account for license plates that were not adequately documented in the data collection process and license plates that were not adequately matched in the database matching process.
3. N/A = not applicable